

INTRODUCTION TO PHARMACY

DOE #5214

CIP Code: 51.0805 Pharmacy Technician/Assistant

Introduction to Pharmacy introduces students to the field of pharmacy and provides opportunity for exploration of career options within the discipline. Varied instructional strategies and technologies are used to help students gain insight into the roles and responsibilities of the pharmaceutical team, state and federal regulations, pharmaceutical agents, prescription processing, pharmacy maintenance, retail sales, and the impact of pharmaceuticals on the delivery of health care in society. Shadowing experiences help students gain insight into the various roles of the pharmaceutical team in retail drug sales. Students have the opportunity to compete in a variety of HOSA competitive events at both the state and national level.

- Recommended Grade Level: 12
- Required Prerequisite: None
- Recommended Prerequisite: Introduction to Health Care Systems or Integrated Health Sciences I&II, Biology, Chemistry, Mathematics,
- Credits: A one semester course, one or two credits per semester
- A Core 40, Core 40 with Academic Honors, and Core 40 with Technical Honors diploma directed elective course
- A Career Academic Sequence, Career-Technical program, or Flex Credit course
- Academic content standards:
<http://www.doe.state.in.us/octe/health/hce/pharmacy.pdf>
- Curriculum Framework: <http://www.doe.state.in.us/octe/health/hce/pharmacy.pdf>
- Teacher Requirements: <http://doe.state.in.us/dps/licensing/assignmentcode>
- Funding: State Additional Pupil Count (APC) vocational funding available if taught by CTE licensed Health Sciences teacher

Content Standards and Competencies

The following are measurable exit standards and competencies that students should know and be able to do at the conclusion of the course. The content standards and competencies do not define a specific sequence for teaching and learning. While all content standards and competencies should be addressed in some way, teaching order and areas of emphasis will vary according to local needs.

1. CAREER OPTIONS: DESCRIBE POSSIBLE CAREER OPTIONS IN THE FIELD OF PHARMACY.

- 1.1. Identify opportunities for employment in the drug industry.
- 1.2. Explain the educational requirements of the pharmaceutical team.
- 1.3. Describe the roles and responsibilities of the pharmaceutical team.
- 1.4. Explain the chain of command within the pharmacy team.

2. DISPENSING PHARMACEUTICALS: DESCRIBE THE LEGAL RESPONSIBILITIES, LIMITATIONS, AND IMPLICATIONS OF DISPENSING PHARMACEUTICALS.

- 2.1. Identify the DEA, FDA, and OSHA regulations.
- 2.2. Explain the significance of drug control.
- 2.3. Name the drugs which require special controls and record keeping.
- 2.4. Record medication administration in an appropriate format.
- 2.5. Compare issues of malpractice, negligence, and liability as they relate to administering medications.
- 2.6. Predict the effects of unethical practices on consumers.

3. BODY SYSTEMS AND THE DISEASE PROCESS: RELATE THE USE OF PHARMACEUTICALS TO BODY SYSTEMS AND THE DISEASE PROCESS.

- 3.1. Recall the structure and explain the function of each body system.
- 3.2. Describe the usual drug therapy for common diseases and disorders.
- 3.3. Describe six factors that influence the action of drugs.
- 3.4. List the indications and contraindications for specific drug use.
- 3.5. Identify side effects, toxic effects, and adverse reactions of commonly prescribed drugs.
- 3.6. Identify measures that are used to monitor drug action.
- 3.7. Define terms which describe unwanted medication reactions.
- 3.8. Predict probable causes and effects of patient noncompliance.

4. PHARMACEUTICAL TERMINOLOGY: INTERPRET, TRANSCRIBE, AND COMMUNICATE USING PHARMACEUTICAL TERMS.

- 4.1. Identify the names, classifications, and action(s) of commonly prescribed drugs.
- 4.2. Differentiate between brand name drugs and generic drugs.
- 4.3. Differentiate between over-the-counter drugs and prescription drugs.
- 4.4. Describe the various dosage forms and routes of drug administration.
- 4.5. Identify components of a complete prescription.
- 4.6. Interpret prescription labels on a variety of drugs.

5. DRUG CONVERSION: CONVERT DRUG DOSAGE USING THE METRIC, APOTHECARY AND HOUSEHOLD SYSTEMS.

- 5.1. Perform the mathematical processes necessary to convert units between the metric, apothecary, and household systems of measurement.
- 5.2. Calculate anticipated drug usage for a prescribed period of time.
- 5.3. Interpret calibrations on a syringe, medicine cup, and infusion bag.

6. DISPENSATION OF MEDICATIONS: DEMONSTRATE SAFE AND EFFECTIVE DISPENSATION OF MEDICATIONS.

- 6.1. Describe the rights for processing a prescription or physician's order.
- 6.2. Describe the order verification system used to check medication orders.
- 6.3. Demonstrate ways to set up medications accurately.
- 6.4. Dispense oral medications to patients in a simulated environment.
- 6.5. Administer topical medications to patients in a simulated environment.

- 6.6. Record medications dispensed.
- 6.7. Instruct patients regarding medication compliance.
- 6.8. Identify potential sources of medication errors.
- 6.9. Describe the safety checks used to help prevent medication errors.

7. CLERICAL SKILLS: LIST THE CLERICAL SKILLS NECESSARY FOR THE OPERATION OF A PHARMACY.

- 7.1. Greet customers in an effective and professional manner.
- 7.2. Assist customers to locate needs within the pharmacy.
- 7.3. Operate a cash register.
- 7.4. File records chronologically.
- 7.5. Process a third-party payer claim.
- 7.6. Process cash and credit sales.
- 7.7. Process in-store credit sales.

8. MAINTAINING A PHARMACY: PERFORM THE FUNCTIONS THAT ARE ESSENTIAL TO MAINTAINING A PHARMACY.

- 8.1. Locate drugs in the pharmacy stock.
- 8.2. Differentiate between various medication packaging systems.
- 8.3. Straighten and clean shelves.
- 8.4. Identify proper disposal of expired drugs.
- 8.5. Store drugs properly.
- 8.6. Maintain pharmacy stock.
- 8.7. Receive an order of medications.
- 8.8. Inventory and restock floor medications.

9. SOCIETY AND THE DRUG INDUSTRY: DESCRIBE THE IMPACT OF THE DRUG INDUSTRY ON THE DELIVERY OF HEALTH CARE.

- 9.1. Compare the cost of commonly prescribed drugs at leading pharmacies.
- 9.2. Describe the current proposed legislation regarding the drug industry.